"Bug of the Month"

Over the past couple of months there has been a outbreak occurring in the Puget Sound area. The insect involved is the western tent caterpillar, *Malacosoma californicum*. The western tent caterpillar can be a serious nuisance during one of these periodic outbreaks which generally last 2-3 years and are roughly 8-10 years apart.

WHAT DO THEY LOOK LIKE? The western tent caterpillar overwinters in the egg stage. The eggs are laid around small branches and twigs where 150 to 250 eggs are laid within a foamy silver-grey matrix called spumaline which protects them and glues them to the branch. The larvae hatch in early spring as the buds start to break in April or May. The orange, black and white markings of the larva are very distinctive. The young feed together in a group on new leaves and weave a large silken tent at the end of a branch. These tents are expanded as the larvae grow, providing protection from predators during resting and molting phases and shelter in periods of bad weather. As the caterpillars mature, they begin to feed singly or in small groups. When fully matured the larvae disperse in search of a suitable pupation site. This generally occurs in mid to late June. The pupa is dark reddish-brown and rests inside a pale oval silken cocoon that is dusted with a yellowish powder. After 7 to 10 days the adult moths emerge. The adults are stout-bodied and light brown in color. A single dark line radiates at right angle to the body, bisecting the front wings. They can often be found flying around street and porch lights in the evening. This is occurring now. After mating the female deposits her eggs which mature in about three weeks, but do not hatch until the following spring.

`WHAT DO THEY DO? The western tent caterpillar feeds on a wide variety of plants, but prefers alder, apple, ash, birch, cherry, cottonwood, fruit trees and roses. Early in the development of the caterpillars, they tend to eat all of the leaves on one branch before moving to another. When they start splitting into smaller groups, the attacks spreads to multiple branches. A single tent on a small tree may result in 20% defoliation of that tree. Significant damage to a tree occurs only after prolonged and severe infestations, and is limited mostly to loss of growth and some branch dieback. Defoliated trees usually refoliate in mid-summer, but the leaves are generally smaller. Trees weakened by defoliation can be more susceptible to secondary effects such as infection by fungus and environmental stresses. There are some benefits of a caterpillar outbreak. While the caterpillars are distasteful to most birds, some do feed on them. When larger trees are defoliated, the trees and shrubs below them get more sunlight and a boost in growth. The leaves that are eaten pass through the caterpillar and emerge as little black pellets (the correct term for this is frass), which rains down on the ground and breaks down easily, returning nutrients to the soil.

MANAGEMENT. The best method to control the western tent caterpillar is through mechanical methods.

- In the fall and early spring, remove the egg masses from the trees. The eggs masses look like Styrofoam and usually appear near the ends of branches. Some may be found as flattened shapes on tree trunks and buildings.
- Once the caterpillars have hatched, remove and destroy them and their tents by pruning them from the branches. Evening and early morning are best for this because the caterpillars tend to congregate in their nests at night.
- Reduce the nuisance of adults gathering around outdoor lights at night where they may deposit egg masses, by using yellow light bulbs. These are less attractive to night-flying insects.
- If chemical control is deemed necessary, use the biological insecticide, *Bacillus thuringiensis* (B.t.). Spraying is most effective when the caterpillars are newly hatched. **Always read and follow label directions carefully**.

MORE QUESTIONS? Please do not hesitate to give your "Bug Docs" a call at comm.: (360) 315-4450, DSN: 322-4450 or you can e-mail us at ndveccmei@pnw.med.navy.mil.